

Implementation of New 1-hour NO₂ and SO₂ National Ambient Air Quality Standards

AQ Client Contact Meeting
February 23, 2012

Jim McGraw (jim.mcgraw@dnr.iowa.gov) (515) 242-5167

Iowa DNR – Air Quality Bureau
7900 Hickman Rd, Suite 1
Windsor Heights, IA 50324



IowaDNR

The Iowa Department of Natural Resources



Leading Iowans
in caring for
our natural resources

Air Quality Standards

- **Clean Air Act (CAA)**
 - Requires the U.S. EPA to establish health based standards for criteria pollutants
 - Called National Ambient Air Quality Standards (NAAQS)
 - May also be called “air quality standards” or just “standards”
- **Establishes maximum concentrations of pollutants that are acceptable in the general air we breathe**
 - Primary NAAQS: Protect public health with margin of safety
 - Secondary NAAQS: Protect public welfare, including soil, crops, and vegetation

NAAQS Pollutants

- **Six criteria pollutants**
 - Ground-level ozone (O₃)
 - Particulate Matter (PM)
 - Nitrogen Dioxide (NO₂)
 - Sulfur Dioxide (SO₂)
 - Carbon Monoxide (CO)
 - Lead (Pb)
- **Particulate matter broken into two size fractions, PM₁₀ & PM_{2.5}**
 - Fractions measured in microns
- **NAAQS undergo periodic review, required by CAA**
 - Every 5 years

New/Revised NAAQS Means:

- **Making attainment/nonattainment designations**
- **Updating/revising monitoring networks**
- **Discussing implementation issues/concerns with stakeholders**
- **Updating administrative rules**
- **Revising permitting and modeling guidance**
- **Revising State Implementation Plan (SIP)**

State Implementation Plan (SIP)

- **What is a SIP?**
 - **Shows how a state will meet federal requirements**
 - Developed by state and local air quality agencies
 - **SIPs are legally enforceable documents that are developed to address federal air quality requirements**
 - SIPs are a collection of regulations and planning/technical/supporting documents that States use to address various Clean Air Act requirements
 - SIPs are submitted to EPA for federal approval
 - Once approved, SIPs are federally enforceable

Infrastructure SIP

- **The Infrastructure SIP**
 - **State must demonstrate that it can implement, maintain, and enforce the revised NAAQS**
 - **Discusses the basic (infrastructure) elements of air quality management, such as:**
 - Enforceable emission limitations
 - Air quality permitting and modeling
 - Enforcement program
 - Ambient monitoring program
 - Adequate personnel, resources, and legal authority
- **The specific infrastructure elements are in CAA Sections 110(a)(2)(A) – 110(a)(2)(M)**

NAAQS Implementation Timeframes

- **When a new/revised NAAQS is promulgated, implementation timeframes (up to) are prescribed by the Clean Air Act**
 - **EPA's Designations: 2 years after NAAQS promulgation⁺**
 - **Infrastructure SIP Due: 3 years after NAAQS promulgation**
 - **Nonattainment SIP Due: 3 years after NA designations***
 - **Attainment Date: 5 years after NA designations****

⁺one year extension possible if there is insufficient information

*18 months for lead, sulfur dioxide, and nitrogen dioxide

** Attainment required as “expeditiously as practicable.” Ozone attainment dates are dependent upon classification and vary from 3 to 20 years.

State Law Impacts: Iowa Code 455B.134(14)

House File 2418, signed by Gov 4/7/2010



- **New or revised NAAQS**
 - Convene meetings no later than June 1 during the second calendar year following EPA adoption of a new or revised NAAQS
 - Re: Review emissions limitations
 - **By November 1 of same year: Submit report to Governor and General Assembly with law change recommendations necessary for attainment of new or revised NAAQS**

NO2 NAAQS Update

- **New 1-hr NAAQS promulgated on January 22, 2010**
 - Level: 100 ppb
 - Form: 3 year avg of the 98th percentile
 - Retain the current annual standard of 53 ppb
- **Designations complete**
 - All counties unclassifiable/attainment
- **New monitoring requirements**
 - Near roadway monitors in Metropolitan areas $\geq 500,000$
 - Des Moines: Monitor operational by January 1, 2013
- **Infrastructure SIP due January 22, 2013**
- **Permitting and modeling of 1-hr NO2 currently only required for PSD projects**

SO2 NAAQS Update

- **New 1-hr NAAQS promulgated on June 2, 2010**
 - Level: 75 ppb
 - Form: 3 year avg of the 99th percentile
 - Revocation of 24-hr and annual standards (1 yr after 1-hour designations are effective)
- **State designation recommendations complete**
 - Five counties attainment
 - EPA's hybrid monitoring/modeling approach not used for designations
 - Rest unclassifiable
- **EPA designation recommendations due Feb 2012**
 - Final designations June 2012

SO2 NAAQS Update (Cont.)

- **EPA guidance or possible rulemaking may result in development of “maintenance SIPs” for some or all unclassifiable areas**
 - EPA released draft guidance September 2011
 - Many comments received
 - EPA discussing path forward internally
 - Decisions anticipated ~Feb/March 2012
- **Infrastructure SIP due June 2, 2013**
- **Permitting and modeling of 1-hr SO2 currently only required for PSD projects**

Next Steps

- **Review, update rules**
 - Exemptions, insignificant activities
 - Emission standards
 - Establish 1-hr permitting implementation date
- **Update forms and guidance**
- **Draft infrastructure SIP document**
 - Public comment period
- **Stakeholder Meetings**
 - February and May AQ Client Contact Meetings

Questions/Discussion

- Send questions and comments to Jim McGraw
- www.iowacleanair.com
- www.epa.gov/air/